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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/684,285	10/13/2003	Hiromi Yunoki	2003-2030.ORI	3331

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HAUGEN LAW FIRM  
SUITE 1130 - TCF TOWER  
121 SOUTH EIGHTH STREET  
MINNEAPOLIS, MN 55402

EXAMINER

PUTTLITZ, KARL J

ART UNIT	PAPER NUMBER
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1621

DATE MAILED: 07/01/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/684,285	<b>Applicant(s)</b> YUNOKI ET AL.	
	<b>Examiner</b> Karl J. Puttlitz	<b>Art Unit</b> 1621	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/13/2003.
- 2a) ☒ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-4 is/are pending in the application.
- 4a) Of the above claim(s) 1-3 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 4 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>10/13/2003</u> . | 6) <input type="checkbox"/> Other: _____  |

## **DETAILED ACTION**

### ***Election/Restrictions***

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-3 drawn to a catalyst for the production of acrylic acid classified in class 502 subclass 300+.
- II. Claim 4 drawn to a process for the production of acrylic acid classified in class 562 subclass 531+.

Inventions I and II are related as product and process of use. The inventions can be shown to be distinct if either or both of the following can be shown: (1) the process for using the product as claimed can be practiced with another materially different product or (2) the product as claimed can be used in a materially different process of using that product (MPEP § 806.05(h)). In the instant case the process can be used with a different product, see column 1, lines 24-37 of U.S. patent No. 5,959,143 to Sugi et al. (Sugi).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with Robert Jacobson on June 22, 2004 a provisional election was made with traverse to prosecute the invention of Group II claim 4. Affirmation of this election must be made by applicant in replying to this Office action. Claims 1-3 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over  
Applicant's Admission in view of Sugi.

Claim 4 of the captioned application covers a process for the production of acrylic acid, which comprises the step of carrying out catalytic gas phase oxidation of acrolein in the presence of molecular oxygen, thereby producing the acrylic acid; with the process using a catalyst for production of acrylic acid, namely, a catalyst which is obtained by a process including the steps of: heating a mixed liquid of starting materials including molybdenum and vanadium as essential components; and then molding the resultant dried material with a liquid binder; and then calcining the resultant molding; wherein the liquid binder is an aqueous liquid of 7.0 to 10.0 in pH.

In this connection, Applicant sets forth that the following is known in the prior art regarding the preparation of those catalysts used for the preparation of acrylic acid from acrolein using catalysts comprising molybdenum and vanadium: a catalyst for producing acrylic acid by catalytic gas phase oxidation of acrolein (catalyst for production of acrylic acid), there is often used a catalyst which is obtained by a process including the steps of: for example, adding a liquid binder to a catalytic component powder obtained from a mixed liquid of starting materials including molybdenum and vanadium as essential components; and then molding the resultant mixture; and then calcining the resultant molding. As to processes for producing this catalyst, proposals have been made. Examples of these production processes include: (1) a process including the steps of evaporating a mixed liquid of starting materials to dryness, and then adding polyvinyl alcohol, a water-absorbent resin, and water to the resultant dried material, and then kneading the resultant mixture, and then extrusion-molding the

kneaded mixture (for example, refer to D-A-096183/1993). See page 1 of the specification.

The difference between Applicant's admission and the process set forth in the claims is that while the admission teaches calcinations, it does not explicitly state that calcinations is preformed in connection with the admitted steps. It is for this proposition that the examiner joins Sugi.

Specifically, Sugi teaches a catalyst suitable for use in the production of acrylic acid by catalytic oxidation of acrolein in gas phase with molecular oxygen, and to a process for preparing the catalyst. The catalysts are formed by adding a binder to a precalcined mixture and then calcining the resulting catalyst. One of ordinary skill would have been motivated to modify those processes set forth in Applicant's characterization of the prior art to include a step of calcinations since Sugi demonstrates that calcinations are preformed on precalcined mixtures and that the resulting catalysts perform in a superior manner. See column 6, lines 18-24 ("The catalyst of the present invention has a higher activity at lower temperatures and a higher selectivity of acrylic acid as compared with conventional ones and, therefore, can be used in the reaction under high load conditions. Further, the catalyst has excellent attrition resistance and a very great commercial value.")

Therefore, claim 4 is rendered obvious by the combination of Applicant's Admission with Sugi since this combination teaches the aspects of the claimed invention with a reasonable expectation of success.

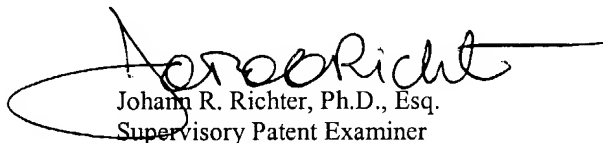
**Conclusion**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karl J. Puttlitz whose telephone number is (571) 272-0645. The examiner can normally be reached on Monday-Friday (alternate).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Johann Richter can be reached on (571) 272-0646.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1235.

Karl J. Puttlitz  
*Assistant Examiner*



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